

In the Claims

Please SUBSTITUTE the following amended claims for the pending claims with the same number (a marked up copy of the prior pending claim with all changes shown is supplied in the appendix).

1. (Twice Amended) An optical inspection system for inspecting the surface of a substrate, comprising:

a light source for emitting an incident light beam along an optical axis;

a first set of optical elements arranged for separating the incident light beam into a plurality of light beams, directing the plurality of light beams to intersect with the surface of the substrate, focusing the plurality of light beams to a plurality of scanning spots on the surface of the substrate; and

a light detector arrangement including individual light detectors that correspond to individual ones of a plurality of transmitted light beams caused by the intersection of the plurality of light beams with the surface of the substrate and by passing the plurality of light beams through the substrate, the light detectors being arranged for sensing the light intensity of the transmitted light.

25. (Once Amended) An optical inspection system for inspecting the surface of a substrate, comprising:

a light source for emitting an incident light beam along an optical axis;

a first set of optical elements arranged for separating the incident light beam into a plurality of light beams, directing the plurality of light beams to intersect with the surface of the substrate, focusing the plurality of light beams to a plurality of scanning spots on the surface of the substrate; and

a light detector arrangement including individual light detectors that correspond to individual ones of a plurality of reflected and transmitted light beams caused by the intersection of the plurality of light beams with the surface of the substrate, the transmitted beams being formed by passing the plurality of light beams through the substrate, the light detectors being arranged for sensing the light intensity of the reflected and transmitted light.

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41. (Once Amended) An optical inspection system for inspecting a substrate, comprising:
a light source for emitting a light beam;
a first optical arrangement for separating the light beam into a plurality of spatially distinct light beams, the first optical arrangement including a diffraction grating or a beam splitter cube;
an objective lens for focusing the plurality of light beams to a plurality of scanning spots on the surface of the substrate and a telescope for varying the size of the scanning spots on the surface of the substrate;
a second optical arrangement for collecting either a plurality of reflected light beams or a plurality of transmitted light beams caused by the intersection of the plurality of light beams with the surface of the substrate, the second optical arrangement including a prism for directing individual ones of the plurality of reflected or transmitted beams to individual light detectors; and
a light detector arrangement including individual light detectors that correspond to individual ones of the plurality of reflected or transmitted light beams, the light detectors being arranged for sensing the light intensity of either the reflected or transmitted light.

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44. (Once Amended) The system as recited in claim 41 wherein the prism includes a facet for each one of the individual reflected or transmitted beams.

45. (Once Amended) The system as recited in claim 41 wherein the second optical arrangement further includes a first lens for collecting the plurality of reflected or transmitted beams and a spherical aberration lens for directing the collected plurality of reflected or transmitted beams to the prism.

Please CANCEL claims 42, 43 and 46.